

Notice of Allowability

Application No.

10/748,208

Applicant(s)

KANEDA ET AL:

Examiner

Rachna Singh

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/20/07.
2. ☒ The allowed claim(s) is/are 25-27, 29-34, 36-41, and 43-45.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/322,029.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 09/05/07.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. The current action includes an Examiner's Amendment.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jennifer A. Reda on 09/06/07.

The application has been amended as follows:

In the abstract:

The invention significantly improves operability by automatically discriminating a plurality of image orientations, which are not assured of always being fed in common orientations, and reduces possible burdens to operators by eliminating efforts required to arrange the images in a common orientation before feeding or to correct each orientations into a common orientation after feeding. The invention improves the operability also by enabling modes in which orientation discrimination as well as tilt corrections can be performed before operator's instructions, if the Auto mode has been specified for the orientation recognition function. The invention also improves accuracy

of processing by determining whether orientations or tilt recognition is proper and providing the result to the operators.

In the claims:

25. An image processing method for processing an input document image, said method comprising the steps of:

displaying an instruction input window to receive both of a first instruction and a second instruction from a user, wherein the instruction input window presents a plurality of checkbox groups each including a plurality of checkboxes, selection of only one checkbox being allowed for each checkbox group, and wherein the first instruction indicates, by selecting one of a plurality of checkboxes in a first checkbox group which includes a checkbox for auto discrimination of the document orientation and four checkboxes each for manual instruction of the document orientation corresponding to ~~one of~~ 0, 90, 180, and 270 degrees respectively, whether the orientation of the document image should be corrected automatically or manually, and wherein the second instruction indicates, by selecting one of a plurality of checkboxes in a second checkbox group which includes a checkbox for auto tilt correction and a checkbox for no tilt correction, whether or not a tilt of the document image should be automatically corrected;

determining, based on the first instruction corresponding to one of the checkboxes selected in the first checkbox group on the instruction input window,

whether the user has instructed that the orientation of the document image should be corrected automatically or manually;

automatically discriminating the orientation of the document image as one of 0, 90, 180, and 270 degrees if it is determined in said determining step that the user has instructed, by selecting the checkbox for auto discrimination, that the orientation of the document image should be automatically corrected;

automatically rotating the document image based on the discriminated orientation of the document image if it is determined in said determining step that the user has instructed the orientation of the document image should be automatically corrected;

rotating the document image according to a rotation angle of one of 0, 90, 180 and 270 degrees corresponding the checkbox for manual instruction selected by the user if it is determined in said determining step that the user has instructed, by selecting one of the four checkboxes for manual instruction, that the orientation of the document image should be manually corrected; and

if it is determined based on the second instruction that the tilt of the document image should be automatically corrected, automatically correcting the tilt of the document image which is rotated in said automatic rotating step or in said rotating step, wherein said automatic correction step does not execute automatic correction of the tilt of the document image which is rotated in said automatic rotating step or in said rotating step if it is determined based on the second instruction that the tilt of the document image should not be automatically corrected.

27. An image processing method according to claim 25, wherein said automatic discrimination step includes discriminating the orientation of the document image by ~~character-~~ recognizing character images included in the document image.

32. An image processing device for processing an input document image comprising:
means for displaying an instruction input window to receive both of a first instruction and a second instruction from a user, wherein the instruction input window presents a plurality of checkbox groups each including a plurality of checkboxes, selection of only one checkbox being allowed for each checkbox group, and wherein the first instruction indicates, by selecting one of a plurality of checkboxes in a first checkbox group which includes a checkbox for auto discrimination of the document orientation and four checkboxes each for manual instruction of the document orientation corresponding to ~~one of~~ 0, 90, 180, and 270 degrees respectively, whether the orientation of the document image should be corrected automatically or manually, and wherein the second instruction indicates, by selecting one of a plurality of checkboxes in a second checkbox group which includes a checkbox for auto tilt correction and a checkbox for no tilt correction, whether or not a tilt of the document image should be automatically corrected;

means for determining, based on the first instruction corresponding to one of the checkboxes selected in the first checkbox group on the instruction input window, whether the user has instructed that the orientation of the document image should be corrected automatically or manually;

means for automatically discriminating the orientation of the document image as one of 0, 90, 180, and 270 degrees if said determining means determines that the user has instructed, by selecting the checkbox for auto discrimination, that the orientation of the document image should be automatically corrected;

means for automatically rotating the document image based on the discriminated orientation of the document image if said determining means determines that the user has instructed the orientation of the document image should be automatically corrected;

means for rotating the document image according to a rotation angle of one of 0, 90, 180 and 270 degrees corresponding to the checkbox for manual instruction selected by the user if said determining means determines that the user has instructed, by selecting one of the four checkboxes for manual instruction, that the orientation of the document image should be manually corrected; and

means for, if it is determined based on the second instruction that the tilt of the document image should be automatically corrected, automatically correcting the tilt of the document image which is rotated by said automatic rotating means or by said rotating means, wherein said automatic correction means does not execute automatic correction of the tilt of the document image which is rotated in said automatic rotating means or in said rotating means if it is determined based on the second instruction that the tilt of the document image should not be automatically corrected.

34. An image processing device according to claim 32, wherein said means for automatically discriminating the orientation of the document image discriminates the

orientation of the document image by ~~character~~—recognizing character images included in the document image.

39. A computer-readable storage medium containing a program for executing processing of an input document image, the program comprising code for:

displaying an instruction input window to receive both of a first instruction and a second instruction from a user, wherein the instruction input window presents a plurality of checkbox groups each including a plurality of checkboxes, selection of only one checkbox being allowed for each checkbox group, and wherein the first instruction indicates, by selecting one of a plurality of checkboxes in a first checkbox group which includes a checkbox for auto discrimination of the document orientation and four checkboxes each for manual instruction of the document orientation corresponding to ~~one of~~ 0, 90, 180, and 270 degrees respectively, whether the orientation of the document image should be corrected automatically or manually, and wherein the second instruction indicates, by selecting one of a plurality of checkboxes in a second checkbox group which includes a checkbox for auto tilt correction and a checkbox for no tilt correction, whether or not a tilt of the document image should be automatically corrected;

determining, based on the first instruction corresponding to one of the checkboxes selected in the first checkbox group on the instruction input window, whether the user has instructed that the orientation of the document image should be corrected automatically or manually;

automatically discriminating the orientation of the document image as one of 0, 90, 180, and 270 degrees if it is determined in said determining step that the user has instructed, by selecting the checkbox for auto discrimination, that the orientation of the document image should be automatically corrected;

automatically rotating the document image based on the discriminated orientation of the document image if it is determined in said determining step that the user has instructed the orientation of the document image should be automatically corrected;

rotating the document image according to a rotation angle of one of 0, 90, 180 and 270 degrees corresponding the checkbox for manual instruction selected by the user if it is determined in said determining step that the user has instructed, by selecting one of the four checkboxes for manual instruction, that the orientation of the document image should be manually corrected; and

if it is determined based on the second instruction that the tilt of the document image should be automatically corrected, automatically correcting the tilt of the document image which is rotated in said automatic rotating step or in said rotating step, wherein said automatic correction step does not execute automatic correction of the tilt of the document image which is rotated in said automatic rotating step or in said rotating step if it is determined based on the second instruction that the tilt of the document image should not be automatically corrected.


41. A computer-readable storage medium according to claim 39, wherein said code for automatic discrimination causes discrimination of the orientation of the document image by ~~character~~-recognizing character images included in the document image.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh whose telephone number is 571-272-4099. The examiner can normally be reached on M-F (8:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Rachna Singh
09/06/07